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## **The language of typology**

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### **Abstract**

This work presents a restructuring of traditional historical discourses on architectural typology. A typological grammar is presented which advocates a synthesis of typology with the design process.

### **Web Abstract**

The prevailing historical discourse on architectural typology has tended to present discrete phases in its development which stand in conflict to one another. This research develops an alternative interpretation by proposing that typological thinking is inherent to act of design. It reconsiders historical conceptions of typology in relation to the design process, specifically linking it to the concept of *design thinking*. Types are understood to be specific constructions that are used by the architect to frame design problems. They are considered analogous to language and embed archetypal meaning and morphological principles which are linked through an internal grammar, depending on the context of their use. This reading of type not only provides a way to interpret typology but it is also a means to connect existing precedent to new architecture at all stages of the design process. Through framing projects in this manner, type may be understood as a tool for both the analysis of potential work and a source of conjecture for novel designs.

### **Biography**

Robert Grover is an architect and Teaching Fellow researching design process and pedagogy.

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Typology is a constantly re-emerging concept in architectural discourse since the term's conception in the early 19<sup>th</sup> Century. To describe an architectural object involves an act of typifying; a generalisation of built form to common characteristics. Both the analysis of architecture and its creation require this abstraction which offers the potential to form types and expose initially unapparent relationships. Typology's Enlightenment origins sought to link architecture to a natural order, but its terminology has subsequently been adopted in modernist rejections of mass culture and neo-rationalist pursuits of *continua* and meaning. Despite widespread use of the term, the role typology plays in the process of design remain unclear. Attempts to link its academic origins to the creation of architectural form (notably by Gottfried Semper in the 19<sup>th</sup> Century, and Giulio Carlo Argan and Aldo Rossi in the 20<sup>th</sup> Century) have done little to synthesise the two, and have merely succeeded to alienate it from practice.

While theorists of type have debated its origins, the use of the term in practice has often been reduced to naïve functional approximations that represent little in common other than a similarity of use. This oversimplification was legitimised in Pevsner's *History of Building types* in which buildings were categorised and arranged from 'the most monumental to the least monumental, from the most ideal to the most utilitarian, from national monuments to factories'.<sup>1</sup> Yet Pevsner exposes the challenge of this categorisation, firstly through the almost unmanageable number of types a comprehensive catalogue would need to contain, and secondly, the seemingly endless appearance of novel functional requirements.

Pevsner inadvertently raises the problem of terminology and the ambiguity of *type*. Indeed, *typology* and *type* are often used interchangeably yet they represent distinct concepts. The former refers to the system, the categorical structure or the means of defining the field of the latter.<sup>2</sup> The method of categorisation may vary and that gives rise to different typologies which may host a variety of types. A *precedent* is a single instance or isolated example in contrast to a type, which is a non-physical entity, or a typology, which refers to the means of categorising. Acknowledging that any given architectural singularity has some common characteristics with another, and its situational nature makes it unique, identifying its *type* provides a way of connecting the particular to the universal.

Type's relationship to practice is complicated further by the ill-defined nature of the process of design. *Design methods*, *design methodology* and *design thinking* have all been used to describe the specific processes that designers go through in the creation of new artefacts. This evolving field encompasses diverse approaches such as deterministic processes, reflective practice and heuristic methods. Of the multiple attempts to classify these cognitive processes, *Designerly ways of Knowing*, introduced by Nigel Cross,<sup>3</sup> and its more recent incarnation as *Design Thinking*, bares remarkable similarities with the paradoxical relationship between the particular and the universal embodied by typology. Design Thinking, as described by Kees Dorst, utilises a mode of logical operation known as abduction.<sup>4</sup> In contrast to deduction and induction, abduction involves the generation of concrete reality from a set of general principles and specific values. It is this relationship that lies at the core of both typological design and design thinking. As this paper will set out, type formation is a necessary component of design production.

Although the formal study of typology has only been apparent in architectural theory since the enlightenment,<sup>5</sup> this notional historical genesis undermines the all-encompassing nature of typological thought that has permeated architecture since antiquity. The establishment of architecture as an autonomous field, in which architectural form acquired specific definition necessitates type formation yet its use as a means of interpreting and structuring the process of design has been limited.<sup>6</sup> In part this may be due to a rejection of simultaneous typological concepts as well as the embodiment of ideological stances that exclude multiple interpretive categorisation.

Throughout the history of typology there has been a tension between its conception as a set of formal constructs and the type's fundamental conditions embodying meaning.<sup>7</sup> This paper argues that these definitions are not mutually exclusive but rather contribute to a richer understanding of type which operates like language, governed by grammars which mediate the relationship between meaning and form. This has implications for designers; to satisfy the requirements of a user, a built work must embody values which align to aspirations and the selection of an appropriate type becomes essential to transfer desired meaning.

### **Typology and universal meaning**

The formal history of typology has typically addressed the issue of universality, whether that be through universal human condition, repeatable form or shared experience. The earliest acknowledged writings directly addressing the notion of architectural typology are credited to Antoine-Chrysostome Quatremère de Quincy.<sup>8</sup> Born out of Enlightenment philosophy, it coincided with the efforts of classification in the natural sciences hoping that categorising the past would reveal principles which may be applied to design or, in the case of biology, reveal theoretical new species.<sup>9</sup> Quatremère's process was one of abstraction, a rational deconstruction of architecture to notional origins founded in the natural order. His typology was intended to connect unique architectural instances with their past and universality could form the basis of any number of unique outcomes. It offered a reductionist version of history reconstructing its path in rational terms.

Important to recognise is the distinction that Quatremère made between the abstract concept of *type* as a theoretical idea and the *model*, which he saw as form to be emulated, stripping type of its meaning. Type was the underlying reason of the object derived from base anthropological conditions. Through the use of available materials and dependant on the demands of construction, types emerged which were perpetuated and refined by tradition and gained authenticity through historical usage. Eventually they could transcend their material origins, from timber into stone in classical architecture, for example.

Quatremère lamented both the understanding of type as an imitative model as well as the complete rejection of type; the former 'repressing this art within the bonds of an imitative servility'<sup>10</sup> while the latter freeing it from any constraint to make it meaningless. He appears to be calling for a measured approach to design, a gradual refinement and adaptation of the type in response to cultural conditions and technologies. Yet, his emphasis on fundamental conditions as the foundation of typological thinking limit its value as a synthetic tool. The

categorisation of most architecture as belonging to a small number of universal types is too broad to draw any kind of useful distinction that may inform design.

While Quatremère separated the concept of model and type, Gottfried Semper attempted to synthesise fundamental human experience with the physical world. Four elements (the hearth, the mound, enclosure and the roof) common across antiquity, fulfilled physical and spiritual universal human needs.<sup>11</sup> These indivisible *urtypen*, from which all other forms evolved, were characterised by their function and linked to processes as opposed to any particular form. The artistic object became a unique transformation of these basic types through the act of construction; the hut for example could be considered a response to an essential human need but the process of its making, techniques and materials, operate within a constantly changing social context.

If Quatremère's version of type precedes physical creation, Semper, through the concept of style, transforms the universality of type into specific form.<sup>12</sup> According to Semper, this was guided by the 'influences of climate, natural surroundings and so on'<sup>13</sup> giving rise to various 'developments of the building instinct'<sup>14</sup> which he links to four pre-Hellenic societies (Chinese, Egyptian, Assyrian and Phoenician). What Semper begins to describe is akin to an architectural grammar, a set of principles which governed the combination and manifestation of archetypal conditions.

### **Typology and design**

The challenge faced by protagonists of type is its application to the design process in a coherent manner. The Enlightenment quest for the natural origins of architecture limits its possibility as a tool for design. At a similar time to Quatremère, Jean-Nicholas-Louis Durand constructed an empirical typology of building axes, defined by diagrammatic abstractions of functional *genres*, then furnished with pre-defined components forming models for emulation. Part 3 of his *Précis on the Lectures of Architecture* breaks down the city into its constituent parts; elements of the city (gates, streets, public squares etc.), public buildings (temples, libraries, colleges etc.) and private buildings (townhouses, apartments, tenements etc.).<sup>15</sup> For each part he offers a brief discourse relating them back to classical antiquity as well as illustrations of model examples. It was his intention to enable students to design through modification of the idealised genre diagram to meet more specific briefs however isolates form through function, removing them from archetypal meaning.

Durand's version of universality is one of model form. In his diagrammatic approach, rooms supporting functions are mapped onto abstracted circulation structures. Durand assumed the city was a static entity and accordingly does not account for changing functional requirements. His work implies a neutrality of form yet it is the relationship between mass and space that embody archetypal ideals underpinning our reading of the architecture. This highlights the inherent problem associated with the instrumentality of type. His diagrams struggle to escape the status of the model; they are indicative of form, failing to capture all the possible spatial configurations. Whether deduced from function or abstracted spatial conditions, as soon as pen is put to paper, the type becomes a singularity, undermining the multiplicity that the type embodies. If Quatremère presents an alienated abstraction of type, Durand shows us an instrumentalised yet limiting version of the concept.

Carlo Argan's 1963 article *On the Typology of Architecture* marked the beginning of renewed interest in the field and its relationship to the design process. He sought to make a stage based model of design (plan to structural system to surface treatment) analogous with, as he saw it, the three major classification systems of architecture (configuration, structure and decorative elements).<sup>16</sup> Argan's rather mechanised and linear version of the design process nevertheless recognises the interrelationship between typological thought and design creation. He believed that any project that had its demands rooted in the past requires a critical development of previous solutions embodied by its type.

Argan understood both the repetition and the ignorance of type to be unacceptable however assumed the possibility of each. Six years later, Alan Colquhoun suggested architects could never be freed from the forms of the past, thus to ignore typology is to lose control of the communicative power of architecture.<sup>17</sup> To Colquhoun purely deterministic processes brought about by modernism and functionalism were inadequate and left a void in the design process which ran the risk of being filled by free expression, stripping architecture of its meaning.

This debasing of the modernist type was taken up by Anthony Vidler in his article *The Third Typology* published in 1977 in which he articulates a typological position which uses the city as its source.<sup>18</sup> Unlike functionalism or theories of natural origins, he saw this typology as one founded in the autonomy of urban form. This empirical typology had the capacity to embed 'three levels of meaning-the first, inherited from the ascribed means of the past existence of the forms; the second, derived from the specific fragment and its boundaries, and often crossing between previous types; the third, proposed by a recomposition of these fragments in a new context.'<sup>19</sup> Vidler saw a need to reclaim a 'critical role to public architecture' through the vehicle of this new typology, implicitly placing design at its core.

Vidler, draws from the work of the neo-rationalists, especially Aldo Rossi whose own writings and works present a case for typological thinking. Like Quatremère, Rossi saw type as a principle prior to form, however, seeks not to uncover abstracted values, but those that have come about through shared creation of the city. Rossi's types were empirically derived and focused on re-using the urban forms which was seen as a continuous morphology. Types emerged from built structure as a product of social order rather than a direct result of primitive human conditions. He considered type as being the *very idea of architecture*<sup>20</sup> and all theories of architecture were typological. Any one type may manifest itself in any number of forms and all forms are reducible to type.

Rossi saw construction as the process through which analysis could become concrete, in this way type elevated from a theoretical ideal. His work presents a tension between the general (type) and specific memory, the buildings some kind of manifestation of fundamental being.<sup>21</sup> In his early career, Rossi's application of type was both a conscious and scientific act initiated by deep analysis of the city. The quest for objectivity lead him to an architecture of primary forms<sup>22</sup> and inextricably links it to the very determinism that Colquhoun is reacting to. Despite radically different conceptions of typology, Rossi's approach shares similarities with Gottfried Semper's *Doctrine of Style* which suggested that fundamental types were given form through the process of craft. It is in the act of making, the application of

available technologies and materials, that type is given form and becomes an expression of base human conditions. Rossi comes close to generating a more complex vision. His work suggests a uniqueness of type to cultural context and through focussing on the forms of the city as the lens in which to reveal type, analytical study becomes a precursor to typological thought.

## Design thinking

To limit typological thought to those protagonists that actively engaged with its terminology is to undermine its pervasiveness in architectural thinking. Design is a process of abstraction, whereby potential reality is codified, manipulated and restructured. Type utilisation may be a conscious action in which the designer selects a type appropriate to context and function which can convey specific meaning, however, it may also be an unconscious act which arises in the creation of form.

Understanding the design process is key to realising the relationship between typological thought and design. In the 1970s, interest in design theory gave rise to numerous cognitive models describing its cognitive processes in part due to a desire to apply scientific methodologies to design. Herbert Simon's *Science of the Artificial*, written in 1969, outlined a problem solving theory of design in which designs were considered *problems* which were first analysed and then solutions proposed.<sup>23</sup> In Simon's model, any complex problem could be broken down into consistently smaller ones which could be tackled individually. It relied on the assumption that design arose as a response to a particular need, and could therefore be considered problematic.

Simon's analysis/synthesis approach became untenable in the light of research into the problems designers actually face. Very few design problems involve straightforward analysis of an issue followed by the creation of a solution. More often than not, design problems have undefined desired outcomes, the processes to produce solutions are unclear and it is not apparent when a successful solution has been achieved. Horst Rittel and Melvin Webber described such problems as *wicked* requiring a whole new kind of thinking.<sup>24</sup>

Alternatives to the problem solving model arose which embraced the heuristic approach of actual designers including Donald Schön's reflective practice,<sup>25</sup> the hermeneutic models of Bill Hillier<sup>26</sup> and the participatory approaches described by Nigel Cross.<sup>27</sup> Of considerable influence on the field was the restructuring of the scientific method embarked upon by Karl Popper in which he questioned prevailing inductive methodologies in favour of one based around the concept of falsification.<sup>28</sup> His theory of Critical Rationalism outlined a conjecture/analysis approach to scientific discovery in which scientists made informed guesses which they then attempted to prove false. Popper's theory was adopted to design, notably by Jane Darke<sup>29</sup> and Michael Brawne.<sup>30</sup> Problematic in the application of Popperian science to design is the lack of formal frameworks for assessing the success of a conjectured solution. While in classical science one is able to make observations to attempt to validate hypotheses, in design this is often not possible. Moreover, when faced with wicked problems, it may not even be clear when this has been achieved. In order to tackle this, the designer is required to engage in *design thinking*; a mode of cognitive processing outside of the traditional deductive/inductive dichotomy.

The first discussion of design thinking could be attributed to Nigel Cross's 1982 article *Designerly Ways of Knowing* which set out the case for treating design as an autonomous academic discipline.<sup>31</sup> At the heart of Cross's design thinking is the ability of the designer to transform abstract patterns into concrete ones through the use of internalised codes or the adoption of a language. This can be described as *framing*, a concept which has its roots in the social sciences.<sup>32</sup> Framing involves synthesising the aspirational values of a project with the principles that govern its formal creation.<sup>33</sup> The designer constructs a project frame in order to reveal a *solution* but also to provide shape to the underlying values and formal possibilities. In the conjecture/analysis model of design, the project frame provides a framework for both the conjecture of new proposals and the assessment of trial solutions.

It is in the act of framing that the designer confronts the paradox of the universal and specific. Through restructuring the design situation general principles are made synonymous with specific aspirational value in order to form concrete reality. Donald Schön's description of framing, written in the early 1980s, describes a dialogue between a critic and a student in which they enter into a frame discourse, in this case 'the spaghetti bowl' versus 'the Renaissance order'.<sup>34</sup> These seemingly straightforward metaphors are the mechanisms through which not only the design is created but also allow it to be analysed. As Dorst notes, the frame actually embodies a complex set of statements which enable the desired value to be achieved through a series of generic principles.

The relationship between the underlying values of a design situation and the principles that govern formal creation represent the inherent typological reasoning of design. In whatever way a project is framed, the designer is engaged in a form of type creation; the identification of a transferable metaphor which captures the potential for the creation of meaning. By implication, types are infinite, personal and arbitrary. In Schön's design studio, it is hard not to engage in a discussion on frame validity; this is the very mechanism through which the design is critiqued. The typological question is not whether the spaghetti bowl is in itself a type, but rather, how valid is this type? Making frames and types synonymous, underpins the relevancy of typology in the process of space creation. It has the potential to engender conjecture and structure critique of the design process.

## **Type and language**

In a given design situation, adopting a type is analogous to use a language in which that building speaks, governed by a set of structural rules; a grammar. A spoken language is expressed in utterances, each individual and potentially unique constructs. In the structuralism of Ferdinand de Saussure, these parts are termed *langue* (the set of rules and codes that constitute a language) and *parole* (a unique utterance).<sup>35</sup> Similarly, an architectural type maybe considered in these terms; the canon of built work within a type forms parole, defined by principles particular to the desired meaning. In this structuralist typology, types are defined by desired archetypal conditions which are made manifest through general principles of building, supporting any number of unique constructs. Binding the two is the *grammar* of the type, itself particular to a context and cultural association. Recognising the appropriate framing of a design situation may connect the value of a project to its appropriate formal possibilities given any particular cultural condition.



The analogy of architecture with language has been widespread. Notably, the comparison is made by Colquhoun who questions the assumption that in art and architecture, *parole* emerges from free expression of *langue*.<sup>36</sup> This relationship is governed by socially agreed aesthetic norms and principles which constitute a grammar. To Colquhoun, this grammar is typological, emerging from either fixed underlying forms (archetypes) or a fragmented historical inheritance. It is a language of all architecture, representing its entire ability to communicate. However, to refocus this analogy, realising the linguistic possibilities of type itself allows a richer reading of the concept. Rather than type acting as a grammar, it becomes a language and through its expression makes possible the synthesis of archetypal conditions with potential morphologies.

Unlike language however, types themselves embody value as well as potential form, both of which generate meaning. Architectural form is never neutral and not only is any singularity a signifier of overt meaning but the constructed type connotes value. Moreover, to understand type formation as frame creation leaves the possibility for new types to be constantly brought into being by the creative designer. The ever shifting dialogue between specific value and universal principles necessitate the designer to invent a language with which they process any design situation.

Both Quatremère and Semper, discuss the evolution of generic conditions to specific cultural form, embodying meaning. Similarly, Rossi's work generates a *language* through a reading of the city. The desire for universality however again undermines the creation of the type limited by the desire for *natural* formation, whether from first principles or observed conditions. The potential of type as simultaneously a universal and individual idea, constructed by the designer is that it allows type to be shaped to specific design situations.

Conveying meaning comes not from a single source but from the ability of a building to be a sign and a signifier simultaneously. The source of meaning in both cases, however is inherently related to cultural relevance. The association between archetypal condition and general principles that are embedded in type are entirely dependent on context and is governed by grammar; the cultural force which binds the universal and the unique. A type consists of three principle parts; its archetype (the particular human condition which it embodies), its general morphological principles and grammar (a set codes which define the relationship between the two). Morphology in this case refers not to visual diagrams or models but rather the set of rules that define the creation of form and spatial relationships.

Rossi presents us with an application of a typological language in his City Hall project for Trieste (the example is used by Vidler to demonstrate the communicative power of the type as well as its potential transformative nature<sup>37</sup>). In the project there is a clear reference to the 18<sup>th</sup> Century prison as well as the arcade, which construct a typological frame. This not only guides the morphological principles of the scheme but also ascribes specific meaning to the project, in this case civility through the reminder of the dialectic between the metaphors. The type is, of course, is an invention; the project neither belongs to a schema of prisons nor to what would be conventionally recognised as a town-hall. However, Rossi captures archetypal values and links this to a morphological expression which only makes sense given the grammar of the type, in this case the conventional associations with the

prison form. As Vidler notes: 'the society that understands the reference to prison will still have need of the reminder, while at the very point that the image finally loses all meaning, the society will either have become entirely prison, or, perhaps, its opposite'.<sup>38</sup>

Rossi's use of a typological frame to structure the project not only informs his decision making process but also provides a framework for critique. However, to suggest that Rossi's work is a pure *scientific* endeavour is untenable. His obsession with purist formalism, plainly stated in his *Scientific Autobiography*,<sup>39</sup> especially in his early works, led to a series of works that appear, as Alan Lipman asserts, 'impassive, unyielding, forbidding; the spaces de Chirico-like in their aloofness, in their silent suppressions.'<sup>40</sup> The obsession with objects leads the work to be somewhat devoid of human agency revealing a misunderstanding of a type grammar. In the case of the Trieste project, the grammar represents an oversimplification of social meaning and austerity of the project emerges through a personal desire for architectural autonomy. Furthermore, one must ask if the prison and arcade is the appropriate metaphor to frame the social conditions of civility.

## Type formation

The historical focus on the discovery of types, either through rational or empirical means, is called into question when framing design as a mode of typological thinking. The implications of project frame and type synthesis suggests that types are almost infinitely numerous. Indeed, new languages may be artificially created or evolve from existing languages. Given the tripartite relationship between archetypal conditions, morphological principles and type grammar three distinct possibilities arise. Firstly, the definition of new modes of being, secondly, the creation of novel formal relationships, and thirdly the reassigning of meaning to form.

The creation new archetypal conditions requires the architect to define new ways of dwelling. In the history of typology, those dealing with fundamental human conditions have sought to reveal these either through rationalism (Quatremère de Quincy for example) or through empirical study (exemplified by Rossi). Quatremère's attempt to deconstruct architectural history generates artificial anthropological states which have seemingly little relevance to contemporary meaning. Rossi's broader attempt to uncover meaning through looking at pre-existing form provides a more grounded approach to archetypal selection yet is limited by the possibilities of the city as a source of cultural legitimacy. Archetypal conditions cannot be created but represent some fundamental act of being embodied by built work and revealed by the designer.

Arguably the prototypical architecture of modernism, itself a reaction to the vagaries of popular culture, was an attempt to herald new ways of inhabitation, deriving new archetypal conditions from mechanised production. Modernism's overt departure from historicism allowed the invention of type as a social and ideological tool.<sup>41</sup> The reduction of the individual to the typical justified repetitive formal units. In a further departure from precedent, functionalism promoted a causal relationship between use and form. As Argan asserts, industrialisation gave rise to new functional requirements that previous building types were ill-equipped to deal with and the emergence of new types.<sup>42</sup> The failing of the modernist 'type' is the assumed link between type and function which is undermined both

by the re-appropriation of buildings and the variance of form between buildings of a similar function.

The creation of new formal relationships and strategies appears at first to be a distinct possibility in the creation of type. However, as Philip Steadman points out, the generic functions of building (the need for shelter, ventilation, light, technology etc.) have necessitated a relatively limited number of formal arrangements.<sup>43</sup> His analysis recognises consistent formal strategies in a variety of building functions due to these universal demands. While theoretically possible, generating a novel series of morphological principles runs into issues as often they require radically new ways of dwelling to facilitate inhabitation. Steadman argues that types follow 'morphological trajectories'; an evolution of form to shifting usage patterns. This moderate shift in design principles echoes the evolutionary versions of architectural history advanced by Semper and Quatremère and questions the necessity, or even possibility, to generate totally new formal conditions.

Despite this, the advance of building technologies draws into question the principles of formal creation that have governed spatial form. To deny historical influence in favour of either pseudo-determinism or total free will undermines the grammar that ties meaning to form. The built work compromises its ability to carry value as there is no shared link between the work and its purpose. As Colquhoun notes 'it would seem that we ought to accept a value system which takes account of the forms and the solutions of the past, if we are to retain control over concepts which will obtrude themselves into the creative process, whether we are aware of it or not'.<sup>44</sup>

To create a new grammar of type is to re-establish the relationship between meaning and form. Yet despite attempts to do so, architects are rarely able to escape underlying cultural forces that tie the two together. Overt attempts in post-modernism succeeded only in subverting the denotive properties of architecture and inevitably failed to re-structure the underlying archetype/morphology relationship. Indeed, as a conscious act this involved the recognition of the existence of the initial type to allow the possibility of subversion. Conversely, the complete ignorance or rejection of a grammar undermines the possibilities to consciously control the communicative possibilities of a work.

Making design itself an act of typological reasoning, suggests that types themselves are specific and unique, yet these are bound by the conditions of human experience and the possibilities of building. To frame a design situation typologically involves the creation of a unique type, one which embodies aspired value, morphological principles linked by a contextual grammar. The creativity of the designer is to draw specific conditions from the vast array of human experience, to recognise its contextual possibilities and to realise appropriate principles of construction. In this formulation of type, the historical preoccupation with its origins are rejected in favour of a pluralist approach in which type may embody a rich array of meaning. Once the need for the absolute universality of type is disregarded, a far wider pool of human experience may be drawn from.

### **Implications for design**

To consider typology as a ubiquitous mode of thought risks dissolving its autonomy as an architectural contrition. Yet, simultaneously, its power is enhanced as a method of analysing and creating architecture. To see a project frame as a typological one allows the designer to assess the suitability of formal manifestations with regard to their archetypal connotations. Moreover, it allows association and reference from the canon of built work which shares similar typological characteristics. It is conceivable that different types may share similar or identical archetypal conditions or alternatively appear to have common morphologies yet it is the relationship between the two which defines their uniqueness. The designer must adopt a language in which to communicate the value of their work.

There is a latent typological force that informs prejudices and defines the genesis of architecture. It is as relevant in design today as at any point in history, perhaps more so given the seemingly unbridled capacity of architectural technology. As Colquhoun recognised, without acknowledging the transformation of the archetype, it is defined by subconscious thought, impoverishing architectural expression or risking misinterpretation.<sup>45</sup> The widespread use of digital design as well as novel building techniques mean the universal principles which have traditionally mediated the expression of architecture are being drawn into question. The rise of computational determinism mimics the ahistorical approach of modernism. Through the rejection of types founded in tradition and precedent and a belief in the objectivity of the formal object, it risks opening the door for arbitrary form stripped of meaning. While digitalisation may represent a rewriting of the universal principles of building it must be connected, through a shared cultural grammar, to archetypal modes of human existence. Placing the user at the centre of the process becomes imperative.

## **Conclusion**

Understanding type as a language, simultaneously liberates the concept from its purely analytic origins yet protects it from the risk of model formation. To effectively utilise it in the design process, the architect must frame aspirational values and generic principles as an overarching type. The key to this is to understand the grammar that governs the archetype/morphology relationship as a contextual entity. It is the ability of the type to contain meaning through this unique union that allows its design potential to be realised.

In the architectural design process, typology is not only a tool but a necessity. Accepting type, the architect cannot arbitrarily assign or remove meaning but must communicate their work through the received conventions that tie morphology to archetypal conditions. Typological reasoning provides a means to construct framing metaphors from typical human experiences and connect the design process to a progressive chain of typological thought. In an era of rapidly expanding architectural possibilities, type provides a mechanism to ground expression in architectural reality.

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- <sup>1</sup> Nikolaus Pevsner, *A History of Building Types*. Vol. 327 (Thames and Hudson London, 1976). p. 10.
- <sup>2</sup> Paul-Alan Johnson, *The Theory of Architecture: Concepts Themes & Practices* (London: John Wiley & Sons, 1994).
- <sup>3</sup> Nigel Cross, 'Designerly Ways of Knowing', *Design Studies*, 3 (1982), 221-27.
- <sup>4</sup> Kees Dorst, 'The Core of 'Design Thinking' and Its Application', *Design studies*, 32 (2011), 521-32.
- <sup>5</sup> Sam Jacoby, 'The Reasoning of Architecture: Type and the Problem of Historicity' (Technischen Universität Berlin, 2013).
- <sup>6</sup> Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture*. Vol. 268 (Thames & Hudson London, 2000). p. 304.
- <sup>7</sup> Ibid. p. 304.
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